283 Spinning is done by all Tuareg women. They spin the hair of the
462 goat, the camel, and the wild sheep, making very solid cords and saddle girths.

286 Weaving is limited to the making of goat's-hair, or more rarely camel's-hair, bags. This is a very primitive technique which does not require any loom and which is, furthermore, in the process of disappearing from the Ahaggar, where only a few noblewomen still practice it. It is completely extinct in Sudanese tribes.

324 Stonework, a relic of Neolithism, was still carried on in the Ahaggar
438 a few years ago to make arm rings. Layers of granitoid schists were formerly worked [415] at Aseksem and Terahart in the Tafedest. We also found
322] an ancient workshop south of Silet on the banks of the Tamanrasset wadi. Today all stone bracelets come from Air and a few from Hombori, where they are manufactured by Tuareg or Hausa artisans.

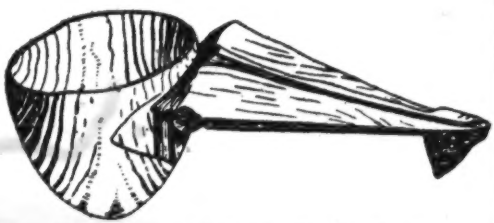

Fig. 48. Tabarekkat wooden ladle, also serving as a drinking vessel.

326 Metalworking is exclusively in the hands of the Enaden, who transform
[567] silver, copper, and iron. These materials, with the exception of iron, do not exist in a native, workable state in the Ahaggar. But although iron
[135] ore is common /279/ in some volcanic rocks of their country, the Tuareg do not have it exploited, for it is found in such small particles that it necessitates a disproportionate amount of forge work for the quantity likely to be recovered. Nevertheless, the memory of casting ore still remains among the Enaden. They use several forges at once, but do not know
[439] the blast furnace. The caravaneers coming from the north or from the Sudan used to bring metals.

177 At the present time silver comes from coins which are melted. For
326 years the Tuareg have had Maria Theresa dollars at their disposal; these

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Fig. 79a–d. Children's toy camels. a. Jaw-bone of goat provided with saddle and rider. It is known as *aknar n amis*. Ahaggar, *Ḥarratin* of Abalessa. (N.M. G. 5914).
b–d. Three roughly-cut stones used as toy camels by Tuareg children. Ahaggar, the *Kel Ahnet* tribe. Dimensions: 0.067, 0.063, and 0.073 m. (N.M. G. 6604 b, d, a).

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233 583 601 that is camels two to three years old, and the same word is also used in kinship terminology for brothers and sisters-in-law.

233 436 593 431 584 684 643 The Tuareg make social payments and many indemnities in camels. If, as may happen, a woman permits her husband to take a second wife, she will claim at least one camel from him. Again, if a woman feels herself badly treated by her husband she will go to her parents' camp and not return to her husband until she has been presented with a camel. Parents will sometimes induce their children to marry against their own feelings by means of a gift of camels. In Ahaggar the indemnity for adultery is fixed at three camels paid by the seducer, while one camel is given by an unfaithful wife. However, these camels are not given to the deceived spouse, but to the supreme chief of Ahaggar, the *Amenukal*.

683 For the knocking out of a tooth two camels must be given, but if the injured person is a woman the payment is five camels. For the destruction of an eye the indemnity is fixed at 25 camels. The same payment is made for the cutting off of a hand or a foot, the cutting of a finger or a toe being fixed at

233 436 682 a price of five camels. In agreement with this system blood-wealth in Ahaggar was fixed at one hundred camels in the past. There were quite definite rules governing the age and appearance of the camels to be paid for a slain man. They should all be she-camels of different age, and of ten distinct colours as follows:—

Age		*Colour*	
10	*tilgad*, or *chét awétay* (one year old)	10	*tibeydegin* (white)
10	*tilusin* (2 years old)	10	*titlarin* (mahogany)
10	*tekkenifaddén* (3 years old)	10	*tizeggerin* (reddish)
10	*tiruyar* (4 years old)	10	*tibhawin* (reddish brown)
10	*chét essin* (5 years old)	10	*tilemlarin* (grey)
10	*chét okkoz* (6 years old)	10	*tizerifin* (metallic grey)
10	*timesseḍas* (7 years old)	10	*timengelin* (dark grey)
10	*chét tahalt* (8 years old)	10	*tikewelin* (black)
20	*tireggamin* (more than eight years old; she-camels considered neither young nor old)	10	*tizerrafin* (piebald)
		10	*tiwinarin* (white cornea)

233 822 * 492 643 The actual value of a camel is never judged from its colour, but colours have a certain æsthetic value, and wealthy Tuareg who keep several riding camels will always have animals of different colours. This is the case with the present *Amenukal* of Ahaggar, who is said to possess between ten and twenty camels trained for riding.

233 857 565 524 232 324 868 181 Camels play a great part in the life of the individual. Boys of the vassal class may be set to herd goats, but their games centre round camels, and they take no particular interest in other domestic animals. For their games very small boys have camel puppets which are jaw-bones of sheep and goats (Fig. 79a), or roughly-cut stones (Fig. 79b–d). These playthings are their "riding camels", "she-camels", and their "caravans". Boys learn to travel on camel-back at a very early age. When three or four years old they sit behind their father's riding saddle or on the top of a loaded pack-camel, and all boys can ride a trotting camel without a saddle before they are ten. Boys grow up with an intimate knowledge of camels and camel-breeding, and with very little interest in any other subject.

[Text continues on p. 104]

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camels. This blood never constitutes a proper dish to the Tuareg. They bleed camels to drink their blood only when they lack water on journeys in the desert. Bleeding is done according to the method described above, and the blood is collected in a drinking bowl. But the Ayr Tuareg say that they work up the mass of blood with the fingers with the result that the upper part of the amount of blood becomes more liquid, though it is always red in colour.

The Tuareg use the following implements to make cereals or other vegetable products into flour:—

(1) A large wooden mortar (*tindé*) with a heavy pestle (*ĕheŗen*) (Fig. 177). It is used in all camps and villages of Ahaggar, Tasilé-n-Ajjer, and Ayr, and is in fact known all over Tuareg country. It is used mainly for pounding millet and sorghum, but it is also employed for pounding other cereals, including certain wild seeds, and for dates, cheese, meat, locusts, and the like. These large wooden mortars are manufactured by the blacksmiths of Southern Tuareg country, including Ayr, where most Northern Tuareg obtain their mortars. Among the Northern Tuareg there are also other mortar types. A small mortar which like the former rests on a foot and is known by the same name (*tindé*) (Fig. 178), is used mainly by sedentary agriculturists for pounding rock-salt, dried tomatoes, tobacco for chewing, and other plants or materials to be used in small quantities. Another type of mortar without a foot and known to the Northern Tuareg as *akabar*, or *takabart*, (Fig. 176) is found mainly among pastoralists who use it on journeys for pounding millet.

(2) A saddle quern (*tehunt*) (Fig. 179), which consists of two natural and in general unfashioned stones, is found in most camps of the Northern Tuareg. This constitutes the only grinding implement for wheat, barley, and certain wild seeds among the *Kel Ajjer*. The stones used for saddle querns are sharpened at intervals with a hard stone or some other hard object (*tusettiekut*) in order that they may grind effectively. A simple saddle quern (*asar*) is also known to the Ayr Tuareg, but it is less common there than in the north.

(3) The handmill (*tesirt*) (Fig. 181) is not a traditional implement of Tuareg culture. It is widely known all over Northern Africa both by Berbers and Arabs, by sedentary peoples and nomads living in black tents. It has been introduced to Ahaggar mainly by the immigration of the Arabic speaking Harratin (Izeggaren) of Tidikelt.

Fig. 180a-c. Pieces of butter-milk cheese (*awles*, pl. *iwlan*).
a. Ahaggar, *Harratin of* Abalessa. Dimension: 0.066–0.068 m in diameter, 0.022 m thick. (N.M. G. 5816).
b. Ahaggar, the *Ajjak-en-eddé* tribe. Dimension: 0.062 × 0.022 m. (N.M. G. 5817b).
c. Ahaggar, the *Ajjak-en-eddé* tribe. Dimension: 0.058 × 0.016 m. (N.M. G. 5817c).

Crafts

Tuareg crafts clearly disclose traits belonging to distinct cultural levels. This may be seen from a brief description of the methods of fire-making.

Matches are in ordinary use nowadays, but they are used economically not only because they cost money but also because many Tuareg live far away from towns or trading posts where matches can be obtained. The embers of a fire smoulder for a very long time, and when the Tuareg want to light a fire they normally find embers under the ashes where their fire has been. Glowing wood is carried from one tent to another on a fragment of calabashes or earthen pots, and some Tuareg even take fire with them in this way during nomadic migrations. If a new fire has to be lit and matches are not available, most Tuareg use the well-known method of fire-making by means of flint and steel. This method is widely resorted to in Northern Africa even to-day, and is practised among the Tuareg of Ahaggar as follows:— The curved piece of steel (*énefed*) is placed over the three middle fingers of the right hand. It is struck against a small piece of flint (*tafarast*) held between the first and second fingers of the left hand together with a small piece of lighting material which may be a small piece of cotton cloth. However, the best lighting material (*tajjert*) is a piece of wood of *tefe'ryast* (*Echinops Bovei*), which has been boiled and thereupon beaten into a fibrous mass with a stone. The Tuareg keep this lighting material in a particular leather bag (*tarallabt*) together with the steel and one or two pieces of flint (Fig. 198). Lighting material according to Maire is also made from a plant named *térahit* (*Traganum nudatum*) (Maire 1933, p. 82). The spark produced by striking the steel against the flint causes the lighting material to glow, and after blowing on it or swinging it in the air, it is placed under a small bunch of hay which burst into flame after further heavy blowing. The use of flint and steel is not a very difficult method of fire-making, and I have used it myself on journeys when matches had come to an end.

The Tuareg do not generally use more primitive methods of fire-making nowadays. But they know an ancient method of making fire by rubbing a piece of hard wood (*agar* in Ahaggar, *agar* in Ayr; *Maerua crassifolia*) against a piece of soft wood (*turha* in Ahaggar, *turza* in Ayr; *Calotropis procera*). By this process they produce by hand rubbing a glowing dust which is brought into flame by means of lighting material and hay as described above. One of my informants among the Ayr Tuareg had produced fire according to this method. Lhote states that the method is at times used by the Tuareg of Ahaggar, where the hard ribs of date palm leaves are also used for starting a fire by rubbing (Lhote 1955a, p. 258).

Stone materials play a very little part in Tuareg crafts. Natural stones are used occasionally as

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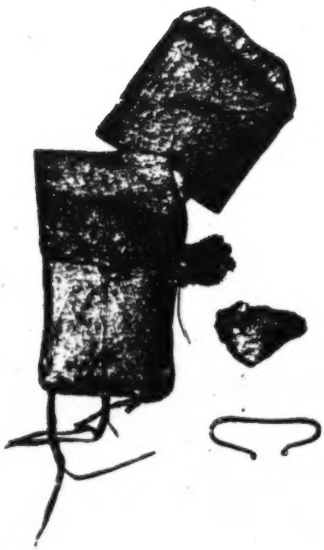

Fig. 198. Flint (*tafarast*), steel (*énefed*), and lighting material (*tajjeri*). The lighting material, which is conserved in a leather bag (*taṛallabt*), is made from wood of *téféryast* (*Echinops Bovei*). Ahaggar, the *Aǧuh-en-tehlé* tribe. Dimension of the steel 0.065 m long. (F.M. 154a–d).

4/2 tools, e.g., for hammering tent pegs into the ground, for rope making as described below, for separating the hide from the body when skinning a barbary sheep, and for crushing rock-salt, red pebber, dried tomatoes, tobacco, and the like. We have seen above that the Tuareg saddle querns used for grinding cereals are natural stones of a particular form and size, and that they are used for grinding without any particular fashioning, though sometimes treated with a hard stone or a piece of iron to make the grinding surface more rugged and effective. The handmill is never manufactured by pastoral Tuareg (cf. p. 214 ff., Figs. 179–182).

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4/2
172 Prehistoric quern stones and stone pestles are found in many regions of the Central Sahara and these ancient implements, I was told, are sometimes used by the Tuareg of Ahaggar for grinding and pounding (Fig. 200). The Tuareg also use the numerous neolithic stone axes (Fig. 199) as whetstones for iron knives. These axes are known to the Ahaggar Tuareg as *taḍeft n eǧenna*, that is "the axe of the rain (or the thunder)", and all Tuareg believe that they have fallen from the sky during heavy storms.

301 Stone material is still used for certain Tuareg ornaments, and notably for the well-known arm-ring (*ahbeǧ* in Ahaggar, *éweki* in Ayr) which is worn by most adult men and also by some boys. These rings are sometimes mentioned in literature as a weapon, but they are not well fitted for this owing to their fragility. Most arm-rings are made from soft stone such as serpentine, and are manufactured by blacksmiths (Ineden).

[564]